

=> d his

(FILE 'HOME' ENTERED AT 14:08:07 ON 17 SEP 1999)

FILE 'CA' ENTERED AT 14:08:14 ON 17 SEP 1999

L1 47879 S WBC OR(WHITE OR BLOOD OR LEUKOCYTE) (5A) (DIFFERENT? OR COUNT?)  
L2 4294 S L1 AND(LYSE OR LYSING OR LYTIC OR LYSIS)  
L3 662 S L1 AND DILU?  
L4 112 S L3 AND L2  
L5 978 S L1 AND(APPARAT? OR APP OR DEVICE OR AUTOMAT?)  
L6 1975 S L1 AND FLOW?  
L7 140 S L5 AND L6  
L8 13333 S L1 AND(ANIMAL OR SPECIE)  
L9 1104 S L2 AND L8  
L10 17 S L5 AND L9  
L11 36 S L6 AND L9  
L12 24 S L3 AND L9  
L13 150 S L5 AND L8  
L14 18 S L4 AND L5  
L15 24 S L4 AND L8  
L16 6 S L3 AND L13  
L17 91 S L10-12, L14-L16  
L18 56 S L17 NOT PY>1995  
L19 24 S L18 NOT(VECTOR OR VIRUS OR IMMUN?)

FILE 'MEDLINE' ENTERED AT 14:29:56 ON 17 SEP 1999

L20 89 S L19

FILE 'BIOSIS' ENTERED AT 14:32:18 ON 17 SEP 1999

L21 71 S L19

FILE 'CA, MEDLINE, BIOSIS' ENTERED AT 14:35:26 ON 17 SEP 1999

L22 173 DUP REM L19 L20 L21 (11 DUPLICATES REMOVED)

=> d l22 bib,ab 1-173

L22 ANSWER 45 OF 173 CA COPYRIGHT 1999 ACS

AN 119:135041 CA

TI Diluent and detergent reagent system for whole-blood cell counting

IN Wong, Show Chu

PA Sequoia Turner Corp., USA

SO U.S., 7 pp. Cont. of U.S. Ser. No. 641,975, abandoned. CODEN: USXXAM

DT Patent

LA English

PI US 5227304 A 19930713 US 1992-918162 19920721

PRAI US 1991-641975 19910116

AB An improved multi-purpose blood diluent for use with a gentle lysing agent and improved detergent reagent system are disclosed which are esp. suitable for use in routine electronic enumeration and volumetric differentiation of blood cells. The preferred imidazole stabilizer used in the diluent reagent is found to be an excellent cell-stabilizing agent and buffer for maintaining cell morphol. during operation. A synergistic combination of a superior antimicrobial agent, the preferred Triadine-10, used in the diluent and the detergent reagents, not only prevents bacterial or fungal growth, but also helps to stabilize cells and to obtain distinct volumetric differentiation of certain leukocyte populations. The preferred Brij 35 in a balanced salt soln. has proved to be an efficient and cost-effective detergent to ensure accurate results and trouble-free operation of the analyzers.

L22 ANSWER 67 OF 173 CA COPYRIGHT 1999 ACS

AN 118:97269 CA

TI Evaluation of an automated system for hemoglobin measurement in animals  
AU Callan, Mary Beth; Giger, Urs; Oakley, Donna A.; Scotti, Mary V.; Shofer,  
Frances S.

CS Sch. Vet. Med., Univ. Pennsylvania, Philadelphia, PA, 19104-6010, USA  
SO Am. J. Vet. Res. (1992), 53(10), 1760-4 CODEN: AJVRAH; ISSN: 0002-9645  
DT Journal  
LA English

AB One automated system photometrically measures blood Hb concn. after  
conversion of Hb to azide methHb without diln. and was found to be a simple  
and accurate instrument for use in human medicine. The authors evaluated  
the system for its accuracy in measuring blood Hb concn. in animals by  
comparing it with std. techniques and for its suitability in veterinary  
practice. Blood samples, anticoagulated with potassium EDTA, from 78  
healthy animals (33 dogs, 17 cats, 13 horses, and 15 cows) and 58 dogs and  
4 cats with various blood abnormalities (10 anemia, 11 polycythemia, 21  
lipemia, 16 leukocytosis, and 6 icterus) were analyzed. In all species,  
blood Hb concn. of healthy animals detd. by the system was comparable to  
that measured by std. cyanmethHb methods (ie, an automated counter; rI =  
0.987 to 0.998 and a Hb kit, rI = 0.946 to 0.993). The aforementioned  
system also yielded similar values to those obtained by use of std. methods  
in anemic, polycythemic, and icteric dogs and cats. Moreover, the system  
reads the absorbance at 2 wavelengths to correct for turbidity, and  
therefore, accurately measured Hb concn. in blood samples with severe  
lipemia (triglycerides concn. > 500 mg/dL) and marked leukocytosis (>50,000  
WBC/ $\mu$ L), whereas other std. Hb techniques are known to give falsely high  
results. The automated system compares favorably to std. methods, and is a  
simple and accurate instrument to quickly measure Hb concn. in animals.

L22 ANSWER 107 OF 173 MEDLINE

AN 88226262 MEDLINE

DN 88226262

TI Evaluation of leukocyte number by using an automated blood cell counter and  
a traditional hematological method in animals irradiated with gamma rays.

AU Mackova N; Misurova E

CS Department of General Biology, Faculty of Science, University Kosice, CSSR.

SO FOLIA HAEMATOLOGICA. INTERNATIONALES MAGAZIN FUR KLINISCHE UND  
MORPHOLOGISCHE BLUTFORSCHUNG, (1987) 114 (6) 810-6. Journal code: F0F.

DT Journal; Article; (JOURNAL ARTICLE)

LA English

AB Female mice were irradiated with a single whole body dose of 7 Gy of gamma-  
rays. Leucocyte numbers were monitored in the peripheral blood using  
automated blood cell counter Coulter counter and a traditional  
hematological method with a light microscope in the Burkner chamber.  
Reticulocyte numbers, RNA blood concentration, spleen weight and  
morphological changes in spleen and bone marrow were also studied. In the  
period between 15th-19th days after irradiation the numbers of leucocytes  
obtained by CC counting were manifold higher than those obtained by  
microscope counting. Since this period is characterised by a steep increase  
in the reticulocyte number and RNA concentration in blood as well as by  
increased weight of spleen as the result of marked regeneration of  
extramedullary erythropoiesis, leukocytes as well as reticulocytes are  
assumed to be additionally registered by the automated counter CC in this  
period, probably due to a higher resistance of reticulocytes to the lysing  
agent Zapoglobine.

L22 ANSWER 108 OF 173 MEDLINE

AN 87165315 MEDLINE

DN 87165315

TI Modification and evaluation of a multichannel blood cell counting system  
for blood analysis in veterinary hematology.  
AU Weiser M G  
SO JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, (1987 Feb 15) 190  
(4) 411-5. Journal code: HAV. ISSN: 0003-1488.  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
AB A multichannel, semiautomated, blood cell counting system (Coulter Counter  
Model S550) was modified for use in veterinary hematology by increasing  
both the erythrocyte and leukocyte aperture currents to 225 V and 195 V,  
respectively, followed by calibration with human blood. It was evaluated by  
use of 350 samples from dogs, cats, horses, and cows. Values for leukocyte  
count, erythrocyte count, mean corpuscular volume, and hematocrit generated  
by the S550 were compared with values generated by an automated  
multichannel counter with histogram capability and other reference  
procedures when appropriate. Mean differences for values between S550 and  
reference values were less than calibration tolerance limits for the  
instrument. Correlation coefficients were excellent for all values of each  
species. To assess behavior of leukocytes of the different species with  
respect to the counting threshold, leukocyte size distribution histograms  
were generated for all samples analyzed on the S550. Means for mean  
leukocyte volumes in diluent and lysing reagents were 55.5, 56.6, 67.4, and  
72.8 fl for dogs, cats, horses, and cows, respectively. Canine leukocyte  
counts, because of small leukocyte size, were an average of 14% less for 5  
samples analyzed on the unmodified instrument, compared with analysis after  
increasing the leukocyte aperture current. Leukocyte threshold failures  
attributable to interfering particles, resulting in falsely high counts,  
were recognized in 14%, 10%, 8% and 0% of feline, bovine, canine, and  
equine samples, respectively. The magnitude of error in these samples  
averaged 5% for cows and dogs, but was considered not important. However,  
leukocyte counts of feline samples in this group averaged 44% falsely high.

L22 ANSWER 110 OF 173 MEDLINE  
AN 87177022 MEDLINE  
DN 87177022  
TI Spurious elevation of automated leukocyte counts induced by Fluosol DA 20%.  
AU Talley R L; Hodges G R; Worley S E; Lotuaco L G  
SO RESEARCH COMMUNICATIONS IN CHEMICAL PATHOLOGY AND PHARMACOLOGY, (1987 Jan)  
55 (1) 117-31. Journal code: R62. ISSN: 0034-5164.  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
AB During studies with Fluosol DA 20% (FDA) in rats, an artifactual  
leukocytosis was observed when an impedance type electronic cell counter  
was used. The effect was found to be directly related to the duration of  
the interval between addition of an erythrocyte lysing fluid and counting,  
observed up to 11 d after transfusion with FDA, blood cell associated,  
reproducible in vitro, FDA concentration dependent, temperature dependent,  
and present when human blood was used instead of rat blood.  
Microscopically, the effect appears to be the result of agglutination of  
lysed erythrocyte membranes due to the interaction of erythrocytes, the  
emulsion component of FDA, and the quaternary ammonium salt component of  
the lysing fluid. These data suggest that FDA causes subtle changes in  
erythrocytes and raises the possibility that other cells may be similarly  
affected.

L22 ANSWER 124 OF 173 BIOSIS COPYRIGHT 1999 BIOSIS  
AN 1985:422321 BIOSIS  
DN BA80:92313

TI APPLICATION OF AN AUTOMATED HEMATOLOGY ANALYZER HA-5 TO THE HEMATOLOGIC  
TESTING OF RAT ESPECIALLY ON CHRONOMETRIC CHANGES IN RED BLOOD CELLS.  
AU NISHIKAWA T; WADA S; KOSHIMURA T; TSUTSUI M; JOSHIMA H; AOKI K; NAGASAWA T;  
KINOSHITA T  
CS DEP. ORAL PATHOL., OSAKA DENTAL UNIV., 1-47, KYOBASHI, HIGASHI-KU, OSAKA  
540, JPN.  
SO J OSAKA ODONTOL SOC, (1985) 48 (1), 88-98. CODEN: SIGAAE. ISSN: 0030-6150.  
LA Japanese  
AB In animal experiments requiring rapid treatment of a large number of blood  
sample, improved efficiency and precision in measurement of hematological  
values was obtained by introducing an automated hematology analyzer. It was  
necessary to discuss not only the conditions of application of an auto-  
hematology analyzer for human blood to the hematological testing of small  
animals, but also changes in blood attributable to a variety of procedures;  
these conditions and changes served as basic data. Application of the  
hematology analyzer HA/5 to rat blood is reported and measurement  
conditions and chronometric changes in red blood cells are discussed on the  
basis of measurement of hematological values, microscopic morphological  
findings and measurement of the volume of hemolysis of 51Cr-labeled red  
blood cells or 59Fe-labeled new red blood cells. The threshold value at  
measurement of red blood cell count (RBC) should be 2.5, and that of white  
blood cell count (WBC), 2.5. In principle, the measurement should be  
conducted immediately after blood collection; no special processing is  
given to values obtained within 6 h after. When a long time is required  
from blood collection until the measurement, blood should be kept at a low  
temperature and a 2nd dilution should be done just before RBC measurement.  
When HA/5 was used under these conditions, the measurement results were  
close to those obtained by routine manual methods in most of the items.  
HA/5 can be applied to rat blood. As to chronometric changes in red blood  
cells, RBC decreased and morphology changed from discocytes to echinocytes,  
and then to stomatocytes; hemolysis occurred. The amount of hemolysis  
increased in course of time. 51Cr-labeled red cells were more likely to  
lyse than 59Fe-labeled new red cells. In application of HA/5 to rat blood,  
abundant caution should be paid on protection of blood cells, especially  
erythrocytes.

L222 ANSWER 125 OF 173 BIOSIS COPYRIGHT 1999 BIOSIS

AN 1985:422322 BIOSIS

DN BA80:92314

TI APPLICATION OF THE HEMATOLOGY ANALYZER HA-5 TO CLINICAL HEMATOLOGICAL  
VALUES IN HAMSTER ESPECIALLY ON MEASUREMENT CONDITIONS.

AU NISHIKAWA T; TOMITA J; MIZUNO M; OKAMOTO J; ZEN M; KANOU N; TSUTSUI M

CS DEP. ORAL PATHOL., OSAKA DENTAL UNIV., 1-47, KYOBASHI, HIGASHI-KU, OSAKA  
540, JPN.

SO J OSAKA ODONTOL SOC, (1985) 48 (1), 78-87. CODEN: SIGAAE. ISSN: 0030-6150.

LA Japanese

AB Auto-hematology analyzers are currently used to measure hematological  
values when many samples are handled because of good reproducibility and  
measuring capacity. RBC [red blood cells], WBC [white blood cells], Hb, Ht  
[hematocrit] were measured in hamster blood using Hematology Analyzer HA/5  
(HA/5) and routine manual methods as well, to examine measurement  
conditions when the analyzer is applied to the blood test of small  
experimental animals. Threshold values at measurement of blood cells  
should be 2.0 for RBC and 3.0 for WBC. Although it is ideal to conduct  
measurement immediately after blood collecting, if it is within 6 h after,  
no special processing is given measurements. When a long time is required  
from blood collecting until measurement, blood should be kept still at a  
low temperature and 2nd dilution should be done soon before RBC

measurement. Churning should be performed immediately before measurement, but not excessively. In measuring WBC and Hb, 100 µl of lysing and Hb reagent should be added and 5 min later, measurement commenced. When HA/5 was used in the above conditions, measurement results were close to those by routine manual methods in most of the items. HA/5 can be applied also to hamsters.

L22 ANSWER 132 OF 173 MEDLINE

AN 84281413 MEDLINE

DN 84281413

TI A new method for fast blood cell counting and partial differentiation by flow cytometry.

AU Valet G

SO BLUT, (1984 Aug) 49 (2) 83-90. Journal code: A8W. ISSN: 0006-5242.

DT Journal; Article; (JOURNAL ARTICLE)

LA English

AB A new blood counting method by flow cytometry is described which determines absolute counts and relative proportions of erythrocytes, reticulocytes, thrombocytes, lymphocytes and granulocytes from one sample of saline diluted human or animal blood. Staining time is 2 to 5 min and measuring time between 1 and 2 additional minutes. Measured simultaneously are the electrical cell volume, the green and optionally also the red fluorescence of the transmembrane potential sensitive dye 3,3-dihexyloxacarbocyanine DiOC6(3) and the RNA/DNA stain acridine orange (AO). Work is under way to fully automate staining, measurement and data evaluation. The use of stains by which blood cell counting and biochemical analysis can be combined offers new possibilities for routine blood cell counting without requirement for additional time. The potential of such stains is that pathologic cell conditions which are not, or not yet reflected in the cell count may be earlier detectable by biochemical stains.

L22 ANSWER 139 OF 173 MEDLINE

AN 83002631 MEDLINE

DN 83002631

TI An assessment of the Ortho ELT-8.

AU England J M; Chetty M C; Chadwick R; Woodhead G B

SO CLINICAL AND LABORATORY HAEMATOLOGY, (1982) 4 (2) 187-99. Journal code: DKF. ISSN: 0141-9854.

DT Journal; Article; (JOURNAL ARTICLE)

LA English

AB The Ortho ELT-8 is an automated blood counter which appears to be safe, precise and free from carry-over. Red and white cell results generally agree with those on the Coulter Counter, Model S, though discrepancies were noted with the WBC and PCV. Reference methods showed the Model S WBC results tended to be inaccurate on the discrepant samples though neither instrument was predominantly responsible for the PCV discrepancies. The ELT-8 platelet count tended to be higher than with the Thrombocounter/Thrombofuge system. When packed cells were diluted in autologous plasma serious variations in the red cell indices (MCV, MCH & MCHC) were first found due to incorrect voltage-frequency converter setting. Even after this setting had been corrected some variations in the MCH and MCHC were still apparent. In the UK National External Quality Assessment Scheme the ELT-8 results on animal bloods did not agree with those produced by Model S users; this discrepancy probably being due to differences between the light-scattering and aperture-impedance technology.

L22 ANSWER 142 OF 173 MEDLINE

AN 82107094 MEDLINE

DN 82107094  
TI Electronic counting of dog leucocytes. Discrepancies arising from calibration with Coulter standard 4C and with the haemocytometer.  
AU Dixon J B; Faulkner M; Green J R  
SO RESEARCH IN VETERINARY SCIENCE, (1981 Sep) 31 (2) 249-52. Journal code: R7D. ISSN: 0034-5288.  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
AB The size distributions of leucocytes in canine blood and in standard 4C are markedly different. The use of 4C to calibrate Coulter counters may result in the selection of a threshold setting for canine leucocytes which is too high. Repeated hand counting may be used as a method of calibration, but regular discrepancies occur between hand and electronic counts which are attributable to the differing lytic actions of the diluents used, acetic acid having a more marked effect than commercial Zapoglobin. Canine leucocytes did not show significantly increased lysis when subjected to Zapoglobin at approximately four times the standard concentration, but did do so on exposure to the standard concentration for longer than five minutes. The degree of discrepancy between hand and electronic counts varied in individual dogs suggesting that there is an inconstant leucocyte subpopulation which behaves differently in response to different lytic agents.

L22 ANSWER 172 OF 173 CA COPYRIGHT 1999 ACS

AN 79:75610 CA  
TI Combined electronic and optical apparatus for analyzing liquid samples  
IN Coulter, Wallace H.  
PA Coulter Electronics, Inc.  
SO U.S., 8 pp. CODEN: USXXAM  
DT Patent  
LA English  
PI US 3743424 A 19730703 US 1970-91130 19701119  
PRAI US 1970-91130 19701119  
AB The app. may be used for counting white cells in a sample suspension of white cells in a diluent and also measuring the Hb in the same sample. The suspension is formed by lysing a blood diln. to provide only white cells and to release Hb from red cells. The app. consists of a particle counting device and an optical hemoglobinometer to measure the Hb.

=> log y

STN INTERNATIONAL LOGOFF AT 14:40:02 ON 17 SEP 1999